

CLAIMS:

1. An air compressor unit comprising:  
an enclosure defining an interior volume;  
a partition at least partially separating the interior volume into at least two  
5 compartments, said at least two compartments including a discharge compartment and a  
component compartment;  
a compressor disposed within the component compartment; and  
a discharge aperture in the enclosure in fluid flow communication with the  
discharge compartment and providing for discharge air flow from the enclosure.  
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2. The unit of claim 1, further comprising an aftercooler disposed within the  
enclosure, wherein the discharge compartment and component compartment are at least  
partially separated by the aftercooler.
- 15 3. The unit of claim 2, wherein the aftercooler is disposed between the  
compressor and the discharge aperture.
4. The unit of claim 1, wherein the component compartment further comprises  
a first compartment and a second compartment.  
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5. The unit of claim 4, wherein the compressor is disposed within the first  
compartment.
6. The unit of claim 4, wherein the compressor is powered by a motor.
- 25 7. The unit of claim 6, wherein the motor is disposed within the second  
compartment.
8. The unit of claim 4, wherein the first compartment and second  
30 compartment are at least partially separated by the partition.
9. The unit of claim 8, further comprising at least one passage in the partition  
permitting fluid flow between the first compartment and the second compartment;

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10. The unit of claim 4, further comprising at least one passage in the partition permitting fluid flow between the component compartment and the discharge compartment.

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11. The unit of claim 10, wherein the at least one passage permits fluid flow between the second compartment and the discharge compartment.

12. The unit of claim 10, further comprising a passage permitting fluid flow between the first compartment and the discharge compartment.

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13. The unit of claim 10, wherein the discharge compartment includes at least two inlet passages permitting fluid flow to enter the discharge compartment.

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14. The unit of claim 1, further comprising a baffle projecting into the discharge compartment from the enclosure, wherein the baffle is disposed between the compressor and the discharge aperture.

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15. The unit of claim 1, further comprising at least one cooling air inlet in the enclosure.

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16. The unit of claim 15, further comprising a blower disposed near the at least one cooling air inlet, wherein the blower is powered by the motor and forces air into the enclosure through at least one cooling air inlet.

17. The unit of claim 16, further comprising a shroud coupled to the enclosure, and at least partially covering the blower, wherein the shroud has an air intake.

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18. The unit of claim 15, wherein the component compartment further comprises a first compartment and a second compartment.

19. The unit of claim 18, wherein the at least one cooling air inlet includes a primary inlet and a secondary inlet, wherein the primary inlet is in fluid flow communication with the first compartment, and the motor inlet is in fluid flow communication with the second compartment.

20. The unit of claim 1, wherein the partition includes a layer of foam for absorbing noise.

21. The unit of claim 1, wherein the enclosure includes a layer of foam for absorbing noise.

22. The unit of claim 1, wherein the compressor is a reciprocating compressor.

FOOTNOTES

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an air intake port permitting a single initial air flow to enter the unit;

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27. The unit of claim 24, wherein the discharge aperture is in fluid flow communication with the discharge compartment, and the final air flow exits the discharge compartment through the discharge aperture.

28. The unit of claim 24, wherein the compressor is disposed in the first compartment.

5 29. The unit of claim 24, wherein the motor is disposed in the second compartment.

30. The unit of claim 24, wherein an aftercooler is disposed between the first compartment and the discharge compartment.

10 31. The unit of claim 24, wherein the rotary blower is disposed in the intake compartment.

15 32. The unit of claim 24, wherein a partition at least partially separates the first compartment from the second compartment, and the partition at least partially separates the second compartment from the discharge compartment.

33. The unit of claim 32, wherein the partition includes a layer of noise absorbing foam.

20 34. The unit of claim 23, wherein the compressor is a reciprocating compressor.

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35. An air compressor unit comprising:  
an intake compartment having an air intake permitting air to enter the unit;  
a blower disposed within the intake compartment drawing air into the  
intake compartment through the air intake, and generating an air flow through the unit;  
5 a primary inlet permitting fluid flow between the intake compartment and a  
first compartment;  
a secondary inlet permitting fluid flow between the intake compartment and  
a second compartment;  
a first passage permitting fluid flow between the first compartment and a  
10 discharge compartment;  
a second passage permitting fluid flow between the first compartment and a  
second compartment;  
a third passage permitting fluid flow between the second compartment and  
the discharge compartment; and  
15 a discharge aperture in fluid flow communication with the discharge  
aperture, permitting air to exit the unit.
36. The unit of claim 35, further comprising a compressor disposed within the  
first compartment.  
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37. The unit of claim 36, wherein the compressor is a reciprocating compressor.
38. The unit of claim 35, further comprising a motor disposed within the  
second compartment.  
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39. The unit of claim 35, further comprising an aftercooler disposed near the  
first passage.
40. The unit of claim 35, wherein a partition at least partially separates the first  
30 compartment from the second compartment, and the partition at least partially separates  
the second compartment from the discharge compartment.

41. The unit of claim 40, wherein the partition includes a layer of noise absorbing foam.

FOOT LOCKER